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# SOIL CONSERVATION LITERATURE

## SELECTED CURRENT REFERENCES

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*Ruby W. Moats*

Ruby W. Moats

Librarian



PERIODICAL ARTICLESConservation

Bennett, H.H. Conservation with war background. Calif. Cult. 88(17): [483], 495. Aug. 23, 1941. 6 C12

"Excerpts from a recent address by Chief of Soil Conservation Service, United States Department of Agriculture."

Caldwell, J.C. Conservation education. Tenn. Planner 2(3):135-141. May/June 1941. 280.7 T25T

Charles, F.E. Conservation against a horizon of war. U.S. Soil Conserv. Serv. Soil Conserv. 7(2):31-33. Aug. 1941. 1.6 So3S

"We must...remember that the conservationist's defense job is rather well cut out for him. It would be a disaster if, in winning the war for democracy, this continent should lose all that it has gained, and more, in its battle for conservation. It would be a world tragedy if, in defending its borders, North America should lose the very resources - its soils and its waters - that make it strong."

Olson, R.E. Conservation in the schools of Nebraska. Jour. Geog. 40(6): 212-220. Sept. 1941. 278.8 J82

"Paper presented at the annual meeting of the National Council of Geography Teachers, at Baton Rouge, Louisiana, December 27, 1940."

Shantz, H.L. Economic aspects of conservation. Jour. Forestry 39(9): 741-747. Sept. 1941. 99.8 F768

Whitaker, J.R. Conservation of natural resources: aims and scope. Tenn. Planner 2(3):115-126, illus. May/June 1941. 280.7 T25T

Contour Farming

Charles, F.E. Contour crop picture painted by farmers. Agr. Leaders' Dig. 22(6):14-15, illus. Sept. 1941. 275 Am3

Shubert, M.L. and Aikman, J.M. Soil moisture content and general plant growth conditions of eroded soil as influenced by contour furrowing. Iowa Acad. Sci. Proc. (1940) 47:77-82. Des Moines, 1941. 500 Io93

Cover Crops

Cover crops for tobacco land. Prog. Farmer (Ky.-Tenn. Ed.) 56(9):8, 41, illus. Sept. 1941. 6 P945K

"From the best reports obtained by the College of Agriculture, over 75 per cent of the plowed land in Kentucky goes through the winter without a protecting cover crop. No doubt the figures in

other states producing tobacco and similar crops to those grown in Kentucky will show comparable planting of cover crops. Without protection it is very difficult to permanently improve the fertility of the land, control erosion, prevent leaching, and provide sufficient winter pasture for livestock. In fact a permanent agriculture cannot be built where soil is left unprotected through the winter months."

Johnston, J.C. Functions of cover crops. Calif. Citrogr. 26(11):318, 332, illus. Sept. 1941. 80 C125

"In summarizing, there are three points that merit serious consideration: First, cover crops are essential to success in handling most orchard soils. Second, winter cover crops with limited summer tillage seems to be the best practice. Lastly, leguminous cover crops are preferred but many nonleguminous cover crops are entirely satisfactory. Volunteer weeds should be used wherever possible."

### Dams

Cleghorne, J.W. Maintenance of stock-watering and irrigation dams. Farming in So. Africa 16(135):279. Aug. 1941. 24 So84

Petersen, E. Fence those dams. S. Dak. Conserv. Digest, Aug. 1941, p. 6, illus. 412.9 So822

Suggests the fencing in of small lakes to conserve the water, supply better water for livestock, prevent erosion, and permit the growing of vegetation for wildlife.

### Drought

Swardt, S.J. de and Burger, O.E. National provision against drought [So. Africa] I. The extent of the drought problem. Farming in So. Africa 16(183):193-196, illus. June 1941. 24 So842

### Experiments

Brandt, A.E. Presentation of results of critical experiments. Agr. Engin. 22(3):293-295. Aug. 1941. 58.8 Ag83

Presented before the Power and Machinery Division at the annual meeting of the American Society of Agricultural Engineers at Knoxville, Tenn., June 1941.

### Farm Machinery

Barger, E.L. and Promersberger, W.I. Dynamometer for testing farm machinery. Agr. Engin. 22(9):323-324, illus. Sept. 1941. 58.8 Ag83

"A cart-type hydraulic drawbar dynamometer designed and built especially for testing tillage machinery is described and illustrated in this article."



Merrill, R.M. How farm machinery has benefited southern agriculture.  
Agr.Engin.22(7):247-248. July 1941. 5S.8 Ag83

Rumsey, M.C. Farewell to the plow? Country Life[Garden City, N.Y.]  
80(5):26, 63-64, illus. Sept. 1941. 80 C832

"Has the time come to develop a new method of dealing with our changed soil? The author believes that the plow belongs with the horse-and-buggy and should be replaced, on the modern farm, by the cover crop disc and deep tillage tools. His thought-provoking manuscript fired the imagination of agricultural experts to whom it was submitted."

### Fire Prevention

Frontz, LeRoy, Tagles, L.D. and Dambach, C.A. Fire - grassland - cropland enemy. U.S. Soil Conserv. Serv. Ohio Val. Reg. Tech. Notes 11. 3pp. Dayton, July 22, 1941. 1.9603 T22 no. 11

### Floods and Flood Control

Chandler, E.L., Chandler, E.F. and Burdick, C.B. Evaluation of flood losses and benefits. Discussion. Amer. Soc. Civ. Engin. Proc. 67(7):1377-1382. Sept. 1941. 290.9 Am3P

Paper, with above title, by Edgar E. Foster appeared in May 1941 Proceedings.

Digges, E.W. Determination of flood-control benefits. Civ. Engin. 11(8): 465-467, illus. Aug. 1941. 290.8 C49  
A proposed basis for evaluating tangible and intangible losses from expected floods.

Flood control on the Connecticut. Engin. News-Rec. 127(3):82-86, illus. July 17, 1941. 290.8 En34

"Current plans for flood control in the Connecticut River basin are outlined and the location of reservoirs and local protection works under construction or projected is given. Also given are the methods used in selecting reservoir sites, balancing reservoir costs against the cost of protective works along the river and determining the economic benefits of the protection afforded."

"Flood control in the Connecticut River Valley is under the general direction of the Chief of Engineers, U.S. Army."

Matthias, N.A. The Los Angeles flood control project. Mil. Engin. 33(191): 382-388, illus. Sept. 1941. 290.9 Un3

Powers, W.L. A flood control and water conservation project. Agr. Engin. 22(7):262, 265, illus. July 1941. 5S.8 Ag83

"The primary object of the multipurposed Willamette Basin Project in Oregon is protection of the area against floods and to conserve the excess water for beneficial use as an aid to development of navigation, power, irrigation, reduction of stream bank erosion, and of stream pollution."

Turner, H.M. and Burdoin, A.J. The Flood hydrograph. Boston Soc. Civ. Engin. Jour. 28(3):232-256, figs. July 1941. 290.8 765

"A part of the material of this paper was contributed to the Committee on Floods and appears as the report of the Sub-Committee on the Flood Hydrograph, in the preliminary Flood Report presented to the Society at the annual meeting March 19, 1941."

### Grasses and Grassland

Clarke, S.L. and Heinrichs, D.H. Regrassing abandoned farms, submarginal cultivated lands and depleted pastures in the Prairie areas of western Canada. Canada Dept. Agr. Pub. 720. 23pp., illus. Ottawa, July 1941. 7 C16F no. 720

"References," p. 23.

"It is now generally recognized that a regrassing program is one of the essential activities being conducted under the Prairie Farm Rehabilitation Act. It is realized that the native grasslands constitute a great natural resource that must be fully utilized and carefully conserved, and that several million acres of marginal and submarginal that has been brought under cultivation for cereal production, must be restored to grass."

Also Canada Dept. Agr. Farmers' Bul. 103.

Fulst, J.L. The evaluation of factors affecting the establishment of stands of perennial grass for erosion control in eastern Colorado. U.S. Soil Conserv. Serv. South. Great Plains, South. Great Plains Messenger, July 15, 1941, pp. [14-13]. 1.9606 So32

Giant Panic on the range. Ariz. Farmer 20(18):7, illus. Aug. 30, 1941. 6 Ar44

A grass which is proving useful in checking erosion.

Keller, Wesley. Grass varieties to improve western range. Experiments in Utah foretell amazing progress. Seed World 50(2):16-17, illus. July 18, 1941. 61.8 Se52

### Green Manure

Cassidy, N.G. Some values of green manure crops. Queensland Agr. Jour. 60(6):488-489. June 1, 1941. 23 Q33

Green manuring the orchard. Queensland Agr. Jour. 60(6):484-487, illus. June 1, 1941. 23 Q33

King, N.J. New green manure crops. Queensland Bur. Sugar Expt. Stas. Cane Growers' Quart. Pul. 9(1):36-38, illus. July 1, 1941. 65.9 Q30

### Ground Water

Huberty, M.R. Chemical composition of ground water. Civ. Engin. 11(3):494-495, illus. Aug. 1941. 290.9 C49

"Hard in hand with the development of our natural resources goes



an increase in the value of ground water. The source, distribution, and chemical composition of ground water affect the lives and industry of large groups of the population. In this fact lies the importance of [this] paper presented... before the Water Supply, Plumbing, and Sanitary Engineering Section, School of Government of the University of Southern California. Although Professor Huberty is primarily concerned with the chemical composition of ground water as related to agriculture, he also discusses the more general aspects of water characteristics in daily life."

### Hydraulics and Hydrology

Dodge, E.R. Verification of drop-inlet hydraulic-model studies by field tests. Civ. Engin. 11(8):496-497. Aug. 1941. 290.8 649

Moore, R.E. and Goodwin, K.R. Hydraulic head measurements in soils with high water tables. Agr. Engin. 22(7):263-264, illus. July 1941. 58.8 Ag83

"Portable apparatus consisting of a soil probe, a mechanism to force the probe into the earth, and a device to measure the hydraulic head at the probe point is described.

"Information on the hydrology and stratigraphy of unconsolidated soil sediments below the water tables may be derived with this apparatus, and application of this information to engineering investigations are discussed."

Ramsar, C.E. Hydrologic and hydraulic research studies with special reference to soil conservation and flood control. Assoc. State Engin. Soc. Bul. 17(2):27-33. Apr. 1941.

Richards, L.A. Hydraulics of water in unsaturated soil. Agr. Engin. 22(9):325-326, illus. Sept. 1941. 58.8 Ag83  
"References," p. 326.

Sherman, L.K. The unit hydrograph and its application. Assoc. State Engin. Soc. Bul. 17(2):4-22, illus. Apr. 1941.  
"References," pp. 21-22.

### Irrigation and Drainage

Brechner, D.L. "Here is a land where life is written in water." Nation's Agr. 16(8):3-4, 14-15, illus. Sept. 1941. 280.82 B89

Clayton, F.S. and Jones, L.A. Controlled drainage in the Northern Everglades of Florida. Agr. Engin. 22(8):287-288, 291. Aug. 1941. 58.8 Ag83

"Paper presented before the Soil and Water Conservation Division at the annual meeting of the American Society of Agricultural Engineers at Knoxville, Tenn., June 1941.

Factors that decide irrigation schemes. American experts outline requirements of various small plants and explain points to bear in mind when buying. Farmer's Weekly[Bloemfontein]61:1155,1157,illus. July 2,1941. 24 F225

Discusses Farmers' Bulletin no.1857:Small irrigation pumping plants,by Carl Rohwer and M.R.Lewis.

Hudson,A.W.and Hopewell,H.G. Mole drainage in New Zealand. New Zeal. Dept.Sci.and Indus.Res.Bul.no.86. 91pp.,illus. Wellington, 1941. 330.9 M48B no.86  
"Literature cited,"p.91.

Hudson,A.W.and Fife,C.V. Mole-drainage investigations in New Zealand. The profiles of some mole-drainage soils and their relation to the depths of mole drains. New Zeal.Jour.Sci.and Technol.A.Agr. Sec.22(4A):197A-208A,illus. Dec.1940. 514 N48  
"References,"p.208A.

Irrigation in India. Indian Engin.109(1):6-7. Jan.1941. 290.8 In2

Irrigation limitations in South Africa.Abandonment of riparian principle desirable for larger rivers. Farmer's Weekly[Bloemfontein]61:1425. July 30,1941. 24 F225

"In his presidential address to Section A of the South African Association for the Advancement of Science,Professor W.G.Sutton, head of the Department of Civil Engineering,Witwatersrand University,in a paper entitled "Problems of irrigation development in South Africa," said that this country was in the relatively early stages of its career in this field of study,whereas most other countries had reached a fair degree of maturity in it.South Africa could therefore profit by their experiences.The countries chosen for special reference were India,the United States and Australia."

Kunz,J.G. Practical management of the irrigated farm. Nebr.Crop Growers' Assoc.Ann.Rpt.1939:161-169,illus. [1941] 2 M27R 1940  
In Nebraska State Board of Agriculture.Annual Report,1940.

Land drainage(Scotland)Act,1941. Scot.Jour.Agr.23(3):272-275. July 1941. 10 Sco82So

"The purpose of this Act,which received the Royal Assent on 26th March,1941,is to enable the Secretary of State during the present war to carry out arterial drainage works in various parts of Scotland where agricultural land is unproductive,or nearly so, because of its liability to floods.It is a war-time measure to meet the need for maintaining and increasing food production."

Lawson,H.J. Orchard irrigation in Arizona. Calif.Citrog.26(11):320, illus. Sept.1941. 80 C125



- Lloyd, M.H. and Gilbert, H.C. Irrigation in Western New York. Rural Electrification 3(4):86-87, 94, illus. Fourth Quarter, 1940. 335.8 R882
- Looper, H.S. Eliminating the guess work in irrigation. Through the Leaves 29(4):[6]-10, illus. July 1941. 66.8 T41
- Molenaar, Aldert. Irrigation pumping with electric power. Agr. Engin. 22(7):257-258, 260, illus. July 1941. 58.8 Ag83
- Nicholson, H.H. Mole draining. Worcestershire Co. Council Dept. Agr. Ed. Agr. Quart. Chron. 9(4):145, 147, 149, 151, 153, illus. Aug. 1941. 10 W892
- Powers, L.L. Drainage: a neglected phase of Oregon agriculture. Oreg. Farmer 64(15):367, illus. July 17, 1941. 6 Or32
- Rayner, G.B. Irrigated pastures in the Maffra district. Victoria Dept. Agr. Jour. 39(Pt. 7):314-318, illus. July 1941. 23 V66J  
"Experience elsewhere and the results from the test plots at Tinamba indicate that the factors which will govern the successful growth of irrigated pastures in the Maffra district are: Careful attention to grading and preparation of the seed bed; selection of good seed - a simple mixture of certified perennial rye grass, cocksfoot, and wild white clover is recommended; the application of superphosphate at the rate of 2 cwt. per acre per annum; a three-weekly watering schedule; and, finally, controlled grazing, giving each paddock a recuperation period of from three weeks to one month between successive grazings."
- Scotfield, C.S. Salts in irrigation water. Discussion. Amer. Soc. Civ. Engin. Proc. 67(7):1385-1388. Sept. 1941. 290.9 Am3P  
Paper, with above title, by Raymond A. Hill, appeared in June 1941 Proceedings.
- Warnick, C.W. Box Elder [County, Utah] farmer's own irrigation system saves time, waste. Utah Farmer 61(2):6, illus. Aug. 15, 1941. 6 D45

#### Kudzu

- Tabor, Paul and Susott, A.W. Zero to thirty million mile-a-minute seedlings. U.S. Soil Conserv. Serv. Soil Conserv. 7(3):61-65, illus. Sept. 1941. 1.6 So3S  
The production of kudzu seedlings in the southeast.

#### Land, Mined

- Schevilje, J.P. Reclaiming Illinois strip mined coal land with trees. Jour. Forestry 39(8):714-719, illus. Aug. 1941. 99.8 F768  
"Literature cited," p. 719.  
"In Illinois about 100 square miles of land have been, or will eventually be stripped in the process of mining coal. Although these areas are but a very small percentage of the total land area



of the state, they are ugly scars on the landscape. Largely through the leadership of the Illinois Division of Forestry the mine operators have undertaken a program of planting stripped areas. This work has now been underway for some years and the results so far obtained are here reported."

### Land Management and Utilization

- Beard, J.S. Land-utilization survey of Trinidad. U.S. Trop. Forest Expt. Sta. Caribbean Forester 2(4):182-187, illus. July 1941. 1.9622 T2C23
- Buie, T.S. Effect of soil conservation districts on land use in the Southeast. Com. Fert. 63(1):20-22. July 1941. 57.8 C73
- Jarvis, C.S. and Murto, H.C. Graphic presentation of land use and hydrologic data. U.S. Soil Conserv. Serv. Soil Conserv. 7(1):23-25, illus. July 1941. 1.6 So3S
- Joint land-grant college. BAE committee, South Carolina. An outline of procedure, cooperative land-use planning in South Carolina, January 1941. 73pp. [n.p., 1941] 282.077 J66  
Bibliography, p. 54.
- Noble, W.R. Fitting land utilization to national defense. U.S. Soil Conserv. Serv. Soil Conserv. 7(2):40-41. Aug. 1941. 1.6 So3S
- Vaughan, T.L. Cooperative land use planning. Mountain Life & Work 17(2):19-21. Summer 1941. 281.28 M86  
"Land use planning is not a project or a method, but a social process. It is a continuing process, designed to supply the need for planning to meet the continuous changes occurring in communities, counties, states, and the nation."

### Legumes

- Graham, E.H. Legumes for erosion control and wildlife. U.S. Dept. Agr. Misc. Pub. no. 412. 153pp., illus. Washington, U.S. Govt. print. off., 1941. 1 Ag84M no. 412
- Simmons, C.F. Hairy vetch. Ark. Agr. Col. Ext. Cir. no. 201, rev. 8pp., illus. Little Rock, Aug. 1941. 275.29 Ar4 no. 201, rev.

### Meteorology

- Fernandez, Jorge. Agricultura y meteorologia. Algodon no. 74, pp. [473]-477, illus. June 1941. 72.9 Ar3  
In Spanish.

Hopkins, J.W. Agricultural meteorology: seasonal incidence of rainless and rainy periods at Winnipeg, Swift Current, and Edmonton. Canad. Jour. Res (sect. C. Bot. Sci.) 19(8): [267]-277, illus. Aug. 1941. 3309 C16Ca

"The frequency of sequences of consecutive days without rain and with rain at each of the above-named meteorological stations has been determined from their records of daily precipitation for the months April to September of the years 1916 to 1937. It is inferred from these frequencies that rainy or rainless days do not in general occur entirely at random, but that the same kind of weather tends to persist over successive days. The statistics have also been used to estimate the expectation of rainless periods. At all three stations, this is least in midsummer (June and July) and greatest in spring and autumn."

### Orchard Erosion

Bregger, J.T. Do we cultivate peaches too much? Rural New Yorker 100(5509): 450, illus. Aug. 9, 1941. 6 R88

Overcultivation increases soil loss, decreases organic matter, and shortens the productive life of the orchard.

Bregger, J.T. Soil conservation in the orchard. Tenn. State Hort. Soc. Proc. (1939-1940) 35-36: 19-24. [1941] 81 T25 35-36th 1939-40

Erosion is an orchard pest. Wash. Farmer 66(19): 470, illus. Sept. 11, 1941. 6 R151

### Pastures

Blow, T.H. The making of better pastures [Caledonia County, Vt.] Better Crops with Plant Food 25(6): 6-8, 44-47, illus. June/June 1941. 6 B46

Dalgliesh, C.S. Pasture establishment on the pumice soils [New Zealand] New Zeal. Jour. Agr. 62(5): 321, 323-329, illus. May 15, 1941. 23 N48J

"Briefly, the methods for the establishment and maintenance of productive pastures on pumice soils consist of adequate and thorough cultivation and consolidation, the use of certified strains of grasses and clovers, liberal applications of superphosphate during the first two years, and adequate control of pasture growth by stocking and management. These methods give a dense pasture sward, which may then be maintained by annual topdressing and good management. The direct method of sowing permanent pastures on the first ploughing and the preparatory method of first sowing temporary pastures and root crops give equally good permanent pastures. The direct method is most adaptable to large areas, and the preparatory method of first temporary pastures and roots is suited to the individual farmer."

Ferris, E.B. Better pastures for North Mississippi. Better Crops with Plant Food 25(7): 17-19, 35, illus. Aug./Sept. 1941. 6 B46



Henson, P.R. and Hein, M.A. A botanical and yield study of pasture mixtures at Beltsville, Maryland. Amer. Soc. Agron. Jour. 33(8): 700-708, illus. Aug. 1941. 4 Im34P  
"Literature cited," p. 708.

Mercer, A.D. Pasture improvement by crop rotation. Manuring and seed mixtures for West Coast land [New Zealand] New Zeal. Jour. Agr. 62(5):337-339. May 15, 1941. 23 N48J

Suggestions for pasture mixtures to meet varying conditions. U.S. Soil Conserv. Serv. Soil Conserv. 7(3):87. Sept. 1941. 1.6 So3S  
Mixtures suggested for Northeastern States, Iowa, Minnesota, and the Dakotas, Northern Corn Belt, and Southern Corn Belt.

Thompson, A.T. When cows can't eat fast enough. Adding legumes to old blue grass sod will help you raise summer pasture production. Wallaces' Farmer and Iowa Homestead 66(17):533, illus. Aug. 23, 1941. 6 W15

#### Rain and Rainfall

Harrold, L.L. Rains on the plains. U.S. Soil Conserv. Serv. Soil Conserv. 7(3):85. Sept. 1941. 1.6 So3S

"This article is based on field observations by the author and on data submitted by John A. Allis, project supervisor, hydrologic division, Central Great Plains Experimental Watershed, Hastings, Nebr."

Wicht, C.L. An approach to the study of rainfall interception by forest canopies. So. African Forestry Assoc. Jour. no. 6, pp. 54-70, illus. Apr. 1941. 99.9 So82

"References," pp. 69-70.

"The paper deals with the study of the amount of rain intercepted by the leaves, twigs, branches and stems of trees, and lost to the forest soil mainly through evaporation. A critical amount of the history of the investigation of rainfall interception is given."

#### Range Management

Campbell, R.S. Managing the ranges for national needs. Amer. Cattle Prod. 22(12):3-5, illus. May 1941. 49 P94

#### Reclamation of Land

Granovsky, A. Reclamation in Palestine: highway to country's restoration. Jewish record. Palestine and Middle East 13(4):63-66, illus. Apr. 1941. 286.8 P172

Discusses: Land improvement, swamp drainage, hill-terracing, afforestation, irrigation, reclamation planning and control, and reclamation authority for Palestine.



Krug, Alfred. 'Aufbauarbeit in der bayerischen Ostmark. National-sozialistische Landpost no.42, p.9. Oct.18,1940. 18 N212  
In German.

"On the building up of agriculture in the Bavarian East March, including land reclamation work and efforts at improving yields."  
Abs.U.S.Bur.Agr.Econ.Agr.Econ.Lit.15(6):629. June 1941.

### Research

Ellison, W.D. Research procedures. Agr.Engin.22(7):249-252,illus.  
July 1941. 58.8 Ag83  
"References cited,"p.252.

### Reservoirs

Brown, C.B. Factors in the control of reservoir silting. Water and Sewage 79(7):60,62,64. July 1941. 290.8 C16

Abstract of paper presented at the annual convention of the American Water Works Association, Toronto, Ont., June 22-26.

Roddick, H.E. Erosion control for reservoir protection. U.S. Soil Conserv.Serv. Soil Conserv.7(3):77-79,illus. Sept.1941. 1.6 So3S

The erosion-control program used on the watersheds surrounding the reservoirs of the East Bay Municipal Utility District (east side of San Francisco Bay) for the purpose of reducing the rate of sedimentation in the storage basins.

### Sedimentation and Silt

Kalinske, A.A. and others. Formulas for the transportation of bed load. Discussion. Amer.Soc.Civ.Engin.Proc.67(7):1302-1316,illus. Sept.1941. 290.9 Am3P

O.G.Haywood, jr., Samuel Shulits, and John S. McNown, joint authors.

Paper, with above title, by H.A. Einstein, appeared in March 1941 Proceedings.

Sediwell, Raymond. Sediments of Pecos river, New Mexico. Jour.Sedimentary Petrology 11(2):80-84. Aug.1941. 398.8 J82

"The source of the Pecos River is in the Pre-Cambrian rocks of the Sangre de Cristo Mountains, New Mexico. From the mountains the course of the river is to the south-southeast, where it flows over successively younger exposures of Pennsylvanian, Permian, and Triassic formations. The sediments in the tributaries of Rio Hondo and Rio Felix are of both igneous and sedimentary origin. The maximum size of the sands is in the 1/2 to 1/4 mm. range and sands in this range increase from 34 per cent of the total at Dilia to 64 per cent at Carlsbad. The heavy minerals transported by the river are magnetite, ilmenite, garnet, epidote, hematite, rutile, purple and transparent zircon, and green, rose, black, blue and brown tourmaline."

Shulits, Samuel. Missouri river slope and sediment. Discussion. Amer.Soc.Civ.Engin.Proc.67(7):1336-1338. Sept.1941. 290.9 Am3P  
Paper, with above title, by William Whipple, jr., appeared in March, 1941 Proceedings.

Wilson, I.T. A new device for sampling lake sediments. Jour.Sedimentary Petrology 11(2):73-79, illus. Aug.1941. 398.8 J82

"The problems involved in securing complete cores of sediment or samples from any depth of water or depth of sediment in lakes presents many difficulties when the deposits are thick, composed mostly of water, or contain much sand. The sampling device described in this paper makes it possible and relatively easy to secure uncontaminated samples from all depths. The fact that nearly the whole apparatus is made of standard materials makes it easily assembled at small expense."

### Snow Surveys

Harper, F.B. and James, J.G. Snow water. U.S. Soil Conserv. Serv. Soil Conserv. 7(1):3-9, illus. July 1941. 1.6 So3S

Snow surveys which inform irrigation farmers of southeast and far-east areas of Oregon of the amount of water which will be available during the summer.

### Sod and Sodding

Enlow, C.R. Building a sod defense. U.S. Soil Conserv. Serv. Soil Conserv. 7(2):52-54, illus. Aug.1941. 1.6 So3S

Nation calls on Yuma co. for Bermuda seed to sod flying fields. Ariz. Farmer 20(15):10. July 19, 1941. 6 Ar44

Bermuda seed will be used for sodding all the U.S. Army aviation fields in states where the grass will get along without irrigation - which means the south, principally

### Soil

Baron, F.M. The study of earths - an American tradition. Civ. Engin. 11(8):473-476, illus. Aug.1941. 290.8 C49

"To a large number of engineers the news that soil mechanics 'wasn't born yesterday' may have a familiar ring. In this paper Professor Baron gives perspective to the present renewed interest in this subject, which has deep roots in the firm foundations of the past. Although restricted by space limitations, he reviews important literature to remind engineers again that yesterday cannot be forgotten in the rapid pace of today..."

Burmister, D.M. Classification system for composite soils. Engin. News-Rec. 127(5):61-63. July 31, 1941. 290.8 En34

"References," p.63.

"A size classification of natural soils is proposed, which also



takes into account grain-size distribution. The class designation is made on the basis of fineness, dispersion of grain size and type of grading. Single classification numbers alone are enough to indicate different size classifications."

Definitions of soil terms. U.S. Soil Conserv. Serv. Upper Miss. Reg. Prog. Exch. Tech. Sup. 10pp., mimeogr. Milwaukee, July 12, 1941. 1.9604 P941

Judd, Ira, Hunsaker, H. and Goldman, Milton. Soil aggregation and water percolation study from a limited area in the Salt River Valley, Arizona. Amer. Soc. Agron. Jour. 33(7):652-656, illus. July 1941. 4 Am34P

"Literature cited," p. 656.

"In the Salt River Valley of Arizona, as in many irrigated areas of the west, are found numerous 'slick' or alkali spots. Water penetration on these spots is slow and in some cases practically nil.

"The investigation herein reported was undertaken with soil from a field comprised of soils designated by the federal soil survey as Sunrise clay loam and Sunrise silty clay.

"The purpose of this study was to determine if a correlation could be established between water percolation and percentage of aggregation for the particular soil in question. Two areas within 50 feet of each other were chosen as the sample plots in a field planted the previous year to alfalfa. On the productive area plant growth was vigorous while on the alkali plot there was no vegetative growth."

Retzer, J. L. and Russell, M. B. Differences in the aggregation of a prairie and a gray-brown podzolic soil. Soil Sci. 52(1):47-53, illus. July 1941. 56.8 So3

"References," p. 58.

"Structure is recognized as having both direct and indirect effects upon the soil as a plant habitat. Directly, it affects root penetration, soil aeration, and the intake and conservation of soil moisture; indirectly, it affects soil fertility by influencing biological and chemical reactions. One of the methods of measuring soil structure is to determine the number and size distribution of water-stable aggregates.

"The results of aggregation studies on two genetically different soils are reported here. The effect of cultivation on structure was determined by comparing the aggregation results from cultivated and from virgin fields of each of the two soils. Three different kinds of organic matter were added to composite soil samples from the cultivated fields of each of the two soils, and the effects on aggregation were noted. The effect of time on the degree of aggregation resulting from these organic matter additions was also determined. A method of expressing aggregation and aggregate size distribution as a single number is presented."



Tyagny-Ryadno, M.G. The influence of clear culture and alfalfa sod on the physicochemical and microbiological properties of the soil. Pedology no.12, pp.46-64. 1939. 57.8 P34  
Pages 63-64 in German.

"Accumulation of P in the plowed layer is the same in rotations studied: minimum in July, a rise in August and lowering in September. Sol. humus is higher in the alfalfa sod rotation. Phys. properties and some microbiol. effects are discussed. The title of 'physico-chemical' properties is not borne out by the content of the paper." J.S.J. Abs.Chem.Abs.35(14):4892. July 20, 1941.

### Soil Conservation

Adams, Glenn. We saw S.C.S. at work. West.Farm Life 43(18):9,12,illus. Sept.15,1941. 6 R153  
West Plum Creek soil erosion district west of Castle Rock, Colorado.

Bennett, H.H. Land and people. U.S. Soil Conserv. Serv. Soil Conserv. 7(3):71-76, 81, illus. Sept. 1941. 1.6 So3S

Bentley, M.R. Recommended conservation practices in Texas. Agr. Engin. 22(8):284. Aug. 1941. 58.8 Ag83

"Paper presented at a meeting of the Southwest Section of the American Society of Agricultural Engineers at Dallas, Texas, April 1941.

Brown, G.F. Grass silage and soil conservation. U.S. Soil Conserv. Serv. Soil Conserv. 7(1):19-22, illus. July 1941. 1.6 So3S

"A dense growth of grasses and legumes has long been recognized as the natural method for conserving and building better soils, and those interested in soil conservation want to know the best method of preserving this forage.

Carlson, Raymond. Water in the magic land. Ariz. Highways 17(4):4-9, illus. Apr. 1941. Library of Congress  
Reprinted in Conservation 7(3):39-40. May/June 1941. 279.8 So8  
Soil and water conservation in Arizona.

Carroll, H.F. and Harper, F.B. This county supports its district. U.S. Soil Conserv. Serv. Soil Conserv. 7(2):54-57, illus. Aug 1941. 1.6 So3S  
Grays Harbor County in southwestern Washington.

Cates, J.S. Revolution in the South. Country Life [Garden City, N.Y.] 80(3):18-19, 45, illus. July 1941. 80 C832

Includes discussion of the introduction into the South of "a series of new sod crops, which grow with great vigor, stop erosion, yield rich forage, and as though by magic build riches into the land."

taking a long view of our own agricultural problems and how vital it is to see them against a background of world conditions."

Second article in series will be by Viscount Lymington.

Kester, Howard. Friends of the soil. Mountain Life & Work 17(2):9-11, 27, illus. Summer 1941. 281.28 M86

"FRIENDS OF THE SOIL - a movement designed to lead men 'to recover and secure their kinship with the holy earth, and to establish justice on the land through the instrumentality of a consecrated rural church.' FRIENDS OF THE SOIL is sponsored and administered by the Fellowship of Southern Churchmen and was born of the conviction that it is the divine business of religion to bind up the wounds of the land and people, to save soils and souls, to make the earth fruitful and beautiful - to dress it and to keep it - and that man cannot attain his full stature until he humbly and reverently allies himself with the spiritual forces inherent in the earth."

Lester, H.H. Factors constituting a good farm conservation plan. U.S. Soil Conserv. Serv. Ohio Val. Reg. Reg. Cir. 252. 3pp., mimeogr. Dayton, Aug. 22, 1941. 1.9603 R26 no. 252

Ligon, W.S., Johnson, E.G. and Morrish, R.L. Conservation measures which need little or no technical assistance. U.S. Soil Conserv. Serv. Ohio Val. Reg. Tech. Notes 12. 9pp., illus. Dayton, July 29, 1941. 1.9603 T22 no. 12

Lowdermilk, W.C. Written in the Syrian desert. Amer. Forests 47(8): 359-363, 386. Aug. 1941. 99.8 F762

"In seven weeks during 1939, the distinguished author, who is soil explorer and assistant chief of the Soil Conservation Service of the Department of Agriculture, traveled nearly 7,000 miles across Algeria, Tunisia, Libya and into Egypt and Palestine, following the route of the Children of Israel. His purpose was to unveil for science the great part played by soil erosion in the crumbling of the empires of the Ancient World. His findings have been tremendously important and have greatly influenced the conduct of our present-day battle against the forces of erosion and soil depletion."

Lowe, J.N. The Alabama conservation plan. U.S. Soil Conserv. Serv. Soil Conserv. 7(1):[10]-14, illus. July 1941. 1.6 So3S

McClymonds, A.E. Bankers put cash value on conservation program. U.S. Soil Conserv. Serv. Soil Conserv. 7(3):65-66. Sept. 1941. 1.6 So3S

McPheters, W.H. Conservation practices in Oklahoma. Agr. Engin. 22(8):280. Aug. 1941. 58.8 Ag83

"Paper presented before a meeting of the Southwest Section of the American Society of Agricultural Engineers at Dallas, Tex., April 1941."



Cauley, T.J. Conservation planning for small farms. U.S. Soil Conserv. Serv. Soil Conserv. 7(1):26-28. July 1941. 1.6 So3S

"It is becoming increasingly apparent that the Soil Conservation Service must develop a definite policy with respect to the problem presented by small farms in areas of relatively poor land."

Charles, F.E. Wanted: technical assistance only. U.S. Soil Conserv. Serv. Soil Conserv. 7(3):66-69, 79, 86, illus. Sept. 1941. 1.6 So3S

The first Soil Conservation Service demonstration project in which only technical guidance was furnished by the Government was formed in Grand Traverse County, Michigan, about 3 years ago.

La defensa del suelo en los Estados Unidos. Campesino [Santiago] 73(3): [124]-126, illus. Mar. 1941. 9.3 Sol2  
In Spanish.

DeWeese, B.G. A private land rehabilitation and soil conservation program. Agr. Engin. 22(9):327-328. Sept. 1941. 58.8 Ag83  
"Paper presented before the Soil and Water Conservation Division at the annual meeting of the American Society of Agricultural Engineers at Knoxville, Tenn., June 1941."

Doll, E.H. Conservation practices weather test of torrential rains, saving water and topsoil [Nebraska]. Mutual Ins. Jour. 47(9):1-3, illus. July 1941. 284.68 M98

Eagles, W.C. Conservation farming on a cotton and tobacco farm. U.S. Soil Conserv. Serv. Soil Conserv. 7(1):[16]-17, illus. July 1941. 1.6 So3S

Farmers conserve water, keep streams clear and find patches best given to wild life. Controlling water is found best means of preventing gullying of fields that should be in pasture or crops. Outdoor Indiana 8(8):8, 31, illus. Sept. 1941. 279.8 Ou82

Hansen, R.E. "I am too old to farm up and down hill." Dakota Farmer 61(16):356-358, illus. Aug. 23, 1941. 6 D14  
Conservation practices on the ranch of Ed Barr, Belvidere, S.D.

Jacks, G.V. Soil conservation & food supplies. A rural charter-1: Country Life [London] 89(2318):536-537, illus. June 21, 1941. 80 C83  
"Erosion due to soil exploitation is one of the big problems that will have to be faced by the post-war world. In this article Mr. Jacks emphasizes its significance for every one of us. He points out that as one food-exporting country after another revolutionises its husbandry in order to preserve its fertility - as the United States has already done, and as Canada is now doing - the produce available for European markets will dwindle, and consequently that importing countries like ours will have to grow more in order to live. He does not anticipate 'a sudden major decline,' from this cause, in exports to Europe, but he shows clearly the importance of



Moore, Harry. Conservation planning for small farms. U.S. Soil Conserv. Serv. Ohio Val. Reg. Reg. Cir. 249. 3pp., processed. Dayton, July 24, 1941. 1.9603 R26 no. 249

"Adapted from a paper entitled 'Conservation planning for small farms' prepared by regional office staff of Region 4."

Morrish, R.H. and Shafer, F.F. Ditch bank seeding. U.S. Soil Conserv. Serv. Ohio Val. Reg. Tech. Notes 16. 6pp., illus. Dayton, Sept. 3, 1941. 1.9603 T22

Pryor, W.C. Footprints in his fields. U.S. Soil Conserv. Serv. Soil Conserv. 7(3):80-81, illus. Sept. 1941. 1.6 So3S

S.P. Emerson offered his farm to the vocational agriculture class at the high school at Lisbon, Iowa as a laboratory for trying out conservation practices.

Soil conservation for the week-end driver. U.S. Agr. Adjustment Admin. Consumers' Guide 7(14):11-14, illus. Apr. 15, 1941. 1.94 Ad422C

"Nicomachus and his father play a soil conservation game every city-minded person can play when he goes driving in the country."

Van Dersal, W.R. The perplexing case of Indian corn. U.S. Soil Conserv. Serv. Soil Conserv. 7(2):46-51, illus. Aug. 1941. 1.6 So3S

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Wilkins, L.A. This farmer plans and works. U.S. Soil Conserv. Serv. Soil Conserv. 7(1):15, illus. July 1941. 1.6 So3S

E.N. Holen, Coffeeville, Mississippi, works out a conservation plan for his severely eroded 240-acre farm.

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### Soil Erosion and Control

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"Compilation on causes and dangers of soil erosion in arid and semi-arid regions; modern soil cultivation methods for prevention of land erosion."

Abs. Engin. Index, 1940, p. 1121.

Doll, E.H. New attacks on the erosion problem. Nebr. Crop Growers' Assoc. Ann. Rpt. 1939:148-153, illus. [1941] 2 27R 1940  
In Nebraska State Board of Agriculture Annual Report, 1940.

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"Investigation of erosion at beach; currents and winds; wave action; protective structures; hurricane dangers; shoreline and offshore changes; current measurements made by subsurface floats."  
Abs. Engin. Index, 1940, p. 120.

Johnson, A.G. Southern California beach erosion. Shore & Beach 8(4):106-109, 120. Oct. 1940.  
"Discussion of beach erosion caused by activities of man; natural processes which create and maintain Southern California beaches; criticism of breakwaters at Santa Barbara and Redondo Beach, Southern Calif.; long range planning of beach improvements."  
Abs. Engin. Index, 1940, p. 120.

Miniature ocean used in research on shore erosion. Sci. News Letter 40(5):70. Apr. 2, 1941. 470 Sci 24  
"The object of these laboratory ocean studies [conducted at the University of California] is to set up duplicate coastline conditions and to analyze the movement and force of waves and currents, and the modifying effect of undersea floor formations. A better understanding of these conditions will make it possible to plan better protective means for beaches and to build more effective breakwaters for harbors. These studies should be of practical aid in the designing of large ships, also; particularly large naval vessels."

Norman, A.G. and Newman, A.S. Some effects of sheet erosion on soil microbiological activity. Soil Sci. 52(1):31-46, tables. July 1941. 56.8 S-3

"References," p. 46.

"The widespread phenomenon of soil erosion has been recognized in all its seriousness only in the last few years. By wind or water, surface soil is removed to be deposited elsewhere on the land or to be lost in drainage ditches and rivers. The effects of these soil movements on the microbiological population have received little attention. The activity of the soil population is controlled by three major interrelated factors, each of which may separately undergo change as a result of erosional processes. These factors are, first, the nature and number of organisms present; second, the amount and quality of the organic matter; and third, the physical environment. The flora of the different horizons of a profile is not identical either in number or type of organisms present. Similarly the organic matter as it decreases in amount with depth may also change in composition. Exposed layers, therefore, would not necessarily be expected to contain or to maintain a normal topsoil flora. Moreover, when movement of soil occurs as a result of water erosion, selective changes may occur in the inorganic and also the organic soil constituents affecting the texture of the soil and thereby perhaps altering the physical environment of the soil population. These results of erosion cannot be completely disentangled."



Report on studies in Orange County[Calif.] Shore & Beach 8(4):110-113, 126-129. Oct.1940.

"Report on California investigation by Beach Erosion Board, covering 22 mi section of ocean front in Orange County, Calif.; figures on amount of beach building material that is being withheld by construction of upland flood control and soil erosion prevention projects; shore line changes; offshore changes; effect of storms, offshore swells, waves and currents; submarine canyon influence on wave height; sand movement; plans of improvement."

Abs.Engin.Index,1940,p.120.

Ross, G.R. and Aylon, D. Erosion and malaria. Measures which control both evils. Rhodesia Agr.Jour.38(4):173-191, illus. Apr.1941. 24 R34

Sears, A.B. The desert threat in the Southern Great Plains. The historical implications of soil erosion. Agr.Hist.15(1):1-11. Jan. 1941. 30.98 Ag8

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Brandt, J.C.S. Erosion and how it is affected by the disturbance of natural balances. Farming in So.Africa 16(184):227-278. July 1941. 24 So842

Clason, E.W. Over bodenvruchtbaarheid. Arch.v.Suikerindus.Nederland on Nederland.Indie 2(3):63-68. May 1941.

"Condensed report on a symposium held at the General Agricultural Expt.Station at Buitenzorg, Java, on examn.in the field, classification, analysis and mapping of soils, examn.by means of plant analyses and plot expts., and on the erosion problem." Abs.Chem.Abs.35(15): 5233. Aug.10,1941.

Coventry, A.F. The streams of agricultural Ontario are giving vigorous warning. C.S.T.A.Rev.[Canada]no.30, pp.7-11, illus. Sept. 1941. 7 C167C

"The problem of restoring the water and soil has scarcely been faced, in spite of the vigorous efforts of a few far-seeing individuals; meanwhile existing conditions seriously threaten the future of Ontario and call for remedial measures on a provincial scale."

Fortuyn-Van Leyden, (Mrs.) C. F. Drogleeever. Man-made deserts? Peking Nat. Hist. Bul. 12(pt.1):27-38, illus. Sept. 1937.

"Lecture given before the Peking Society of Natural History, March 19, 1937."

Fyvie, T. L. Anti-erosion work and pastures must go hand in hand. Pioneer planter nominates kikuyu as "king of grasses" because of its richness, adaptability and binding properties. Maize export spells soil exploitation & soil robbery. Farmer's Weekly [Bloemfontein] 61:4122-4123, illus. July 30, 1941. 24 F225

Gehlsen, C. A. Measures taken in north-eastern Brazil for the control of drought and soil erosion. Internatl. Inst. Agr. Monthly Bul. Agr. Sci. and Pract. 32(4):[117T]-130T, illus. Apr. 1941. 241 In82  
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Sanderson, E. V. The proposed river control bill and the problem - soil erosion [New Zealand] Forest and Bird no. 61, pp. 9-10, illus. Aug. 1941. 413.9 N42

Shepherd, T. L. Burning straw and drifting soil. Saskatchewan drought area farmer urges improved farm practice and soil conservation. Country Guide 60(9):19-20, illus. Sept. 1941. 7 G76

Soil erosion more destructive than war's havoc in Africa. Conservation practices begun years ago fallen into disuse and soil is eroded down to bedrock. Sci. News Letter 40(1):7. July 5, 1941. 470 Sci24  
Statements from an address made by Dr. W. C. Lowdermilk before American Association for the Advancement of Science at Durham, N. H.

T., A. Keep the top soil on the land. Jamaica Agr. Soc. Jour. 45(6&7): 213. June/July 1941. 8 J223

"Lately the Society has been pounding away at getting agriculturists conscious of how important it is to do everything possible to



keep the top soil on the land and not let it wash away down the hillsides. People have heard, during the past six months, more about this subject than ever in their lives before, and mostly everyone is now very familiar with the term "soil conservation". More and more will be heard about the subject, for there is no gainsaying its importance. Articles will be written on it and Instructors will lecture about it, but all this will be of little avail unless growers start to put into practice some of the methods which are being advocated."

Tison, L.J. Erosion autour de piles de ponts en riviere. Belgium Min. des Trav. Pub., Ann. des Trav. Pub. Belg. 41(6):[813]-868, illus. Dec. 1940. 290.9 B41  
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Vale, M.A.G. La conservación de los recursos naturales: el problema, sus diversas fases y la importancia relativa de estas. U.S. Trop. Forest Expt. Sta. Caribbean Forester 2(4):174-181. July 1941. 1.9622 T2C23  
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### Soil Moisture

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"References," pp. 13-14.

Duley, F.L. and Russell, J.C. New methods of rainfall and soil moisture conservation. Nebr. Crop Growers' Assoc. Ann. Rpt. (1939) 31:121-131. [1941] 2 N27R 1940  
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Grabarov, P.G. A new rapid method of determining soil moisture. Pedology no. 11, pp. 89-93. 1939. 57.8 P34  
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Weldon, M.D. The movement of soil moisture. Nebr. Crop Growers' Assoc. Ann. Rpt. 1939:132-135. [1941] 2 N27R 1940  
In Nebraska State Board of Agriculture, Annual Report, 1940.

### Soil Mulch

Eksteen, L.L. and Spuy, M. van der. Effect of the soil mulch. Trop. Agr. [Ceylon] 96(4):231-235, illus. Apr. 1941. 26 T751

"(1) From the experiments described it cannot be deduced that a soil mulch has any noticeable effect on the evaporation of moisture from soil in which the underground water level is very deep.

"(2) The crop yield can be greatly increased by controlling weeds effectively during the early stages.

"(3) Cultivation of the soil reduces run-off.

"(4) Soils cultivated to a rough, broken surface do not easily become windblown."

### Soil Studies

Carino, M.A. Soils of Pangasinan. Recent survey explains why this northern province is one of the most progressive regions of the island [Philippines] Agr. Com. Indus. Life 8(6):6-7, 44-45. June 1941. 25 Ag8

Constable, E.W. and Miles, I.E. Soil testing methods and apparatus designed for economy in time and labor. Amer. Soc. Agron. Jour. 33(7):623-631, illus. July 1941. 4 Am34P

"Literature cited," p. 631.

"Large scale soil testing where economy in time and labor and facility in handling are to be considered presents a number of problems, including suitable handling and transport of samples, large volume of work in limited seasons, prompt availability of analytical results, etc.

"In order to meet such problems improved applications, equipment, and techniques were developed.

"These are characterized by applicability, mass handling and processing, and automatic measuring and control.

"The time and labor necessary in processing for the analysis of pH or soil reaction, organic matter, and plant-food elements are reduced 70 to 80% and difficulties in packaging, transporting, and handling samples are practically eliminated. The overall gain establishes a greatly improved level of efficiency for the work."



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### Strip Cropping

Zeaman, O.R. Strip cropping to control erosion. Wis. Agr. Col. Ext. Cir. 317.  
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Buic, E.C. Terrace system planning to reduce point rows. Agr. Engin.  
22(9):321, 324, illus. Sept. 1941. 58.8 Ag83

"Paper presented before a meeting of the Southwest Section of  
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Susott, A.W. Terraces and neighborliness - all within a day. U.S.  
Soil Conserv. Serv. Soil Conserv. 7(3):82-84, illus. Sept. 1941. 16 So3S  
A community terracing demonstration held on the Beck place in  
Davidson County, N.C., started a soil conservation program on this  
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19(3):7, illus. Sept. 1941. 80 T31

### Vitamins

Donnelly, Maurice. Effects of vitamin B<sub>1</sub> on woody erosion-control  
plants. Science 94(2429):71-72, illus. July 18, 1941. 470 Sci2  
"Conclusions: For the plants tested, no marked beneficial effects  
were found in the initial survival or initial growth rate by adding  
vitamin B<sub>1</sub> in water (in concentration of .05 mg per liter of water)  
to the soil surrounding the plants. The data on survival suggest  
that added vitamin B<sub>1</sub> may have had, under the conditions of the  
experiment, an adverse effect on the survival of some of the species  
tested."

Nicholson, Arnold. Yield is not enough. Country Gent. 111(9):7,45-46, illus. Sept. 1941. 6 C833

"Agricultural practices may face drastic changes in meeting the challenge to grow more minerals and vitamins in crops."

### Water

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"Literature cited," p. 731.

Olson, W.S. The problems of water control. New progress is recorded. Minn. Dept. Conserv. Conserv. Volunteer 2(11):21-24, illus. Aug. 1941. 279.8 C965

"Water conservation means water control."

Rule, R.E. and others. Consumptive use of water for agriculture. Discussion. Amer. Soc. Civ. Engin. Proc. 67(7):1349-1371, illus. Sept. 1941. 290.9 Am3P  
Edgar E. Foster, Charles H. Lee, Harry F. Blaney, and J.L. Burkholder, joint authors.

Paper, with above title, by Robert L. Lowry, jr. and Arthur F. Johnson appeared in April 1941 Proceedings.

### Watersheds

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"In addition to the customary single-farm plans, the Knox County Soil Conservation District in Indiana is taking applications on a small-watershed basis, with the aim of solving both erosion control and drainage problems."

### Wildlife Conservation

Allan, P.F. Fence good conserver of soil and life. West. Farm Life 43(18):4, 21, illus. Sept. 15, 1941. 6 R153

Benson, Ray. The ducks come back. Country Life [Garden City, N.Y.] 80(4):17-18, 64-65, 67, illus. Aug. 1941. 80 C832

"Latest reports from the provinces of Manitoba, Saskatchewan, and Alberta tell us that sportsmen and conservationists can look forward to the largest wildfowl flight in ten years when the marsh grass turns brown this fall... The increase is largely due to a temporarily benevolent nature, which brought rain to shallow lakes and potholes in June when it was most needed. However, substantial credit is due to the good work of Ducks Unlimited, one of the most practical and progressive conservation organizations ever conceived..."



Campbell, A.M. Birds in relation to agriculture. Shrikes, plovers, coursers, sandpipers, snip and dikkop. Farming in So. Africa 16(184):247-248, 259, illus. July 1941. 24 So842

Davenport, L.A. Timber vs. wildlife. Jour. Forestry 39(8):661-666. Aug. 1941. 99.8 F768

An address delivered at the Wisconsin and Upper Michigan Section of the Society of American Foresters at Isle Royale, September 7, 1940.

The Nebraska farmer controls the homes of wildlife. Outdoor Nebr. 17(3):8-9, illus. Summer 1941. 410 Ou86

"1. His field borders, which prevent wind erosion, furnish a home for wildlife.

"2. His strip crops, which prevent water erosion, furnish feed and cover for wildlife.

"3. His stock ponds, when fenced and vegetated, prevent excessive water runoff and harbor waterfowl and other useful wildlife.

"His gullies, when controlled by soil protecting vegetation, provide food and shelters for wildlife.

"His fence rows, planted to growing crops to protect them from searing winds, provide travel lanes and refuge cover."

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FINIS

The first part of the paper is devoted to a general  
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